

MICROWAVE TEST EQUIPMENT

Coaxial Crystal Detectors

Models 420C, 423A/B, 8470A/B, 8471A, 8472A, 8473B/C, 33330B/C

- Flat frequency response
- High burnout protection

- Low SWR
- Field replaceable detector elements



HP 33330B



HP 8470B Opt 012



HP 423A



HP 8470A



HP 423B



HP 8470B



HP 8472A



HP 8471A

HP 423B, 8470B, 8473B/C, 33330B/C Low Barrier Schottky Diode (LBSD) Detectors

The low-barrier Schottky diode (LBSD) detectors are a state-of-the-art addition to the HP family of high performance detectors. Various models provide coverage to 12.4, 18, and 26.5 GHz and input connectors are Type N, APC-7, or APC-3.5 depending on frequency range. Output connector is BNC (f) except for the HP 33330B/C (SMC).

Matched pairs (Opt 001), square-law load (Opt 002), and positive polarity output (Opt 003) are available for most models.

HP 420C, 423A, 8470A, 8471A, 8472A Point-Contact Detectors

These point-contact detectors have been widely used for many years and provide high performance at an economical price. The HP 8470A, 8470A Opt 012, and 8472A provide APC-7, Type N, and SMA connector versions to 18 GHz. Matched pairs are available for applications requiring close detector tracking, and the HP 423A and 8470A can be supplied with video loads for optimum conformance to square law.

Coaxial Crystal Detector Specifications

HP Model	Frequency Range (GHz)	Frequency Response (dB)	SWR Maximum (50Ω Nom.)	Low Level Sensitivity	Maximum Input (Peak or Average)	Short-Term Maximum Input (<1 min.)	Option 001 Matched Pair (order 2 units for each pair)	Options Available	Input Connector	Output Connector	Price
420C	0.01-12.4 Point Contact	±2	2.0	>0.15 mV/μW	100 mW	0.1 watt	±1 dB	001 003	N (m)	BNC (f)	\$140
423B	0.01-12.4 LBSD	±0.2/octave to 8 GHz ±0.3 overall	<1.15 to 4 GHz <1.3 to 12.4 GHz	>0.5 mV/μW	200 mW	1 watt	±0.2 dB to 12.4 GHz	001 002	N (m)	BNC (f)	\$270
423A	0.01-12.4 Point Contact	±0.2/octave to 8 GHz ±0.5 overall	<1.2 to 4.5 GHz <1.35 to 7 GHz <1.5 to 12.4 GHz	>0.4 mV/μW	100 mW	0.1 watt	±0.2 dB to 8 GHz ±0.3 dB to 12.4 GHz	001 002 003	N (m)	BNC (f)	\$220
8470B	0.01-18.0 LBSD	±0.2/octave to 8 GHz ±0.3 to 12.4 GHz ±0.6 to 18 GHz	<1.15 to 4 GHz <1.3 to 15 GHz <1.4 to 18 GHz	>0.5 mV/μW	200 mW	1 watt	±0.2 dB to 12.4 GHz ±0.3 dB to 18 GHz	001 002 003	APC-7	BNC (f)	\$330
8470B Opt 012									N (m)		\$320
8470A	0.01-18.0 Point Contact	±0.2/octave to 8 GHz ±0.5 to 12.4 GHz ±1.0 to 18 GHz	<1.2 to 4.5 GHz <1.35 to 7 GHz <1.5 to 12.4 GHz <1.7 to 18 GHz	>0.4 mV/μW	100 mW	0.1 watt	±0.2 dB to 8 GHz ±0.3 dB to 12.4 GHz ±0.6 dB to 18 GHz	001 002 003	APC-7	BNC (f)	\$260
8470A Opt 012									N (m)		\$245
8473B	0.01-18.0 LBSD	±0.2/octave to 8 GHz ±0.6 to 18 GHz	<1.2 to 4.0 GHz <1.5 to 18 GHz	>0.5 mV/μW	200 mW	1 watt	±0.2 dB to 12.4 GHz ±0.3 dB to 18 GHz	001 003	APC-3.5 (m)	BNC (f)	\$310
8473C	0.01-26.5 LBSD	±0.6 to 20 GHz ±1.5 with a -3.5 dB slope, 20 to 26.5 GHz	<1.2 to 4 GHz <1.5 to 18 GHz <2.2 to 26.5 GHz	>0.5 mV/μW to 18 GHz >0.18 mV/μW to 26.5 GHz	200 mW	1 watt	±0.2 dB to 12.4 GHz ±0.3 dB to 18 GHz ±0.5 dB to 26.5 GHz	001 003	APC-3.5 (m)	BNC (f)	\$360
8472A	0.01-18.0 Point Contact	±0.2/octave to 8 GHz ±0.5 to 12.4 GHz	<1.2 to 4.5 GHz <1.35 to 7 GHz <1.5 to 12.4 GHz <1.7 to 18 GHz	>0.4 mV/μW	100 mW	0.1 watt	±0.2 dB to 8 GHz ±0.3 dB to 12.4 GHz ±0.6 dB to 18 GHz	001 003	SMA (m)	BNC (f)	\$245
33330B	0.01-18.0 LBSD	±0.6	<1.2 to 4.0 GHz <1.5 to 18 GHz	>0.5 mV/μW	200 mW	1 watt	±0.2 dB to 12.4 GHz ±0.3 dB to 18 GHz	001 003	APC-3.5 (m)	SMC (m)	\$302
33330C	0.01-26.5 LBSD	±0.6 to 20 GHz ±1.5 with a -3.5 dB slope, 20 to 26.5 GHz	<1.5 to 18 GHz <2.2 to 26.5 GHz	>0.5 mV/μW to 18 GHz Degrades to 0.18 mV/μW at 26.5 GHz	200 mW	1 watt	±0.3 dB to 18 GHz ±0.5 dB to 26.5 GHz	001 003	APC-3.5 (m)	SMC (m)	\$337
8471A	100 kHz-1.2 GHz Point Contact	±0.6 (typical) ±0.1/100 MHz	1.3 (typical) 50Ω	>0.35 mV/μW	3 Vrms	3 Vrms	No	004 005 006	BNC (m)	BNC (f)	\$100

Options

Option 001: Matched response. Must order two (2) option 001s for a pair of detectors with matched frequency response.

Option 002: Optimum square law load.

Option 003: Positive polarity output.

HP 8471A

004: positive output

005: 75 ohm negative output

006: 75 ohm positive output

N/C
add \$10
add \$10

Point Contact Detectors				Low Barrier Schottky Diodes			
HP Model	Opt. 001	Opt. 002	Opt. 003	HP Model	Opt. 001	Opt. 002	Opt. 003
420C	add \$20	n/a	N/C	423B	add \$25	add \$25	add \$35
423A	add \$25	add \$25	N/C	8470B	add \$25	add \$25	add \$35
8470A	add \$25	add \$25	N/C	8472B	add \$25	n/a	add \$35
8472A	add \$20	n/a	N/C	8473B	add \$25	n/a	add \$35
				8473C	add \$25	n/a	add \$35
				33330B	add \$20	n/a	add \$30
				33330C	add \$20	n/a	add \$30